

**GOVERNMENT OF INDIA
RURAL DEVELOPMENT
LOK SABHA**

UNSTARRED QUESTION NO:2028

ANSWERED ON:12.12.2008

CULTIVATION OF JATROPHA

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Will the Minister of RURAL DEVELOPMENT be pleased to state:

- (a) whether the Government has allowed oil companies in public sector to start cultivation of Jatropha on barren lands in the country;
- (b) if so, the details thereof;
- (c) whether any study has been conducted to examine the commercial viabilities and benefits of such cultivation;
- (d) and if so, the details thereof?

Answer

MINISTER OF THE STATE IN THE MINISTRY OF RURAL DEVELOPMENT (SHRI CHANDRA SEKHAR SAHU)

(a) and (b) Hindustan Petroleum Corporation Limited has signed Memorandum of Understanding with G.B. Pant University of Agriculture and Technology, Pant Nagar in Uttaranchal State for the cultivation of Jatropha, installation of Bio-diesel processing unit and tissue culture development. This is mainly a R&D project to establish standard practices for Jatropha plantation.

Hindustan Petroleum Corporation Limited has Hindustan Petroleum Corporation Limited been prepared a feasibility report of Jatropha plantation and allied activities in the state of Chhattisgarh and is planning to sign Memorandum of Understanding shortly with Government of Chhattisgarh and Chhattisgarh Renewable Energy Development Authority (CREDA) for plantation of Jatropha over 15000 Hectares of land.

Indian Oil Corporation (R&D) has optimized the synthetic processes for the preparation of bio-diesel meeting standard fuel specification (ASTMD 6751 or IS 15607) from various vegetable oils, which include oils from Jatropha carcas, Karanjia, Palm, Rice bran, Sunflower etc. The process has been scaled up in a pilot plant at ICC R&D Centre and numbers of 60 Kg batches of bio-diesel have been produced utilizing various vegetable oils.

The developed technology was transferred to M/s Venus Ethoxyehhers, Goa and M/s KF Technologies Ltd., Kolkata on non-exclusive basis and on nominal technology fee and royalty sharing mechanism.

Indian Oil Corporation (IOC) has entered into a Memorandum of Understanding with Indian Railways to study complete value chain of Bio-diesel. In line with that IOC has taken up plantation on 62 hectares of Railway Land at Surendranagar in Gujarat. About one lakh fifty thousand saplings of Jatropha have been planted at the site. This project is one of its kind in the country, where every aspect of Jatropha Bio-diesel would be studied. This project has been started in 2004. It is expected that production of Jatropha seeds will start from this year end.

Indian Oil Corporation jointly with Haryana Roadways launched field trials on 40 buses of Gurgaon depot in April, 2004. Twenty buses were run on 5% bio-dieseldiesel blends on trial and their smoke, fuel efficiency and drivability were compared with another set of twenty reference buses. A reduction of 10-15 % in smoke density has been observed by the use of Bio-diesel.

The tests have been conducted with 5%, 10 % and 20% blends of Jatropha bio-diesel in diesel on 16 cylinders. Also diesel Locomotive Engine for power, specific fuel consumption, firing pressures and exhaust gas temperatures. Trial runs on Shatabdi and Jan Shatabdi Express trains have been carried out at 5 % and 10 % bio-diesel. It is further planned to lunch BIO trials on five pairs on trains, running through Lucknow.

Indian Oil Corporation, Jointly with TATA Motors has completed a field trial run on 43 buses plied for their employees at TATA Motors in Pune using 10% bio-diesel- diesel blends.

Indian Oil Corporation (IOC) has planned to produce Bio-diesel by initiating energy crop plantation. For this purpose IOC has applied for 30000 hectares of non-forest wasteland in Madhya Pradesh. So far IOC has received allotment of 2000 hectares in Jhabua district in Madhya Pradesh. IOC has signed Memorandum of Understanding on 19.11.2007 with Government of Chhattisgarh for formation of Joint Venture for enter bio-diesel business in the State.

(c) In order to address various researchable issues for integrated development of Jatropha, a National Network on Jatropha was constituted by involving state agricultural universities, Institutions of Council for Scientific and Industrial Research, Indian Council of

Forestry Research and Education, Indian Council for Agricultural Research, Central Food and Technological Research Institute, The Energy Research Institute and Indian Institutes of Technology and is in operation since November, 2004.

(d) As a result of Research and Development programme, Candidate Plus Trees (CPTS) of *Jatropha* (2399 Nos.) have been identified and the same are cryo-preserved in National Gene Bank, New Delhi for future use. These identified CPTs are being tested and evaluated under progeny, Zonal and National trials. Inter-specific hybrids are being developed through hybridization and back-crossing. A wide variation in morphological characteristics have been recorded. Location specific package of practices are being standardized. Elite *Jatropha* accessions have been used for DNA extraction and screening of the primers for DNA profiling.